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ACCESSION NUMBER: 2002-629730 [68] WPIDS
DOC. NO. CPI: C2002-177846
TITLE: Production of O-acetyl-L-serine comprises fermentation of
modified Wild type microorganism strain under acidic
conditions.
DERWENT CLASS: B05 D16 E16
INVENTOR(S): BOCK, A; DASSLER, T; MAIER, T; BOECK, A
PATENT ASSIGNEE(S): (CONE) CONSORTIUM ELEKTROCHEM IND GMBH
COUNTRY COUNT: 32
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
EP 1233067	A1	20020821	(200268)*	GE	10	C12P013-00	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR							
CA 2372133	A1	20020815	(200268)	EN		C12P013-06	
DE 10107002	-A1	20020829	(200268)			C12P013-06	<--
US 2002146783	A1	20021010	(200269)			C12P013-06	
SK 2002000204	A3	20020910	(200274)			C12P013-06	
JP 2002262896	A	20020917	(200276)		6	C12P013-06	
CN 1370836	A	20020925	(200305)			C12P013-06	
KR 2002067623	A	20020823	(200310)			C12P013-06	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 1233067	A1	EP 2002-2036	20020207
CA 2372133	A1	CA 2002-2372133	20020213
DE 10107002	A1	DE 2001-10107002	20010215
US 2002146783	A1	US 2002-77022	20020214
SK 2002000204	A3	SK 2002-204	20020208
JP 2002262896	A	JP 2002-35690	20020213
CN 1370836	A	CN 2002-104769	20020219
KR 2002067623	A	KR 2002-6920	20020207

PRIORITY APPLN. INFO: DE 2001-10107002 20010215

INT. PATENT CLASSIF.:

MAIN: C12P013-00; C12P013-06

INDEX: C12P013-06; C12R001:19

BASIC ABSTRACT:

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NOVELTY - O-Acetyl-L-serine is produced by the fermentation of a microorganism strain derived from a Wild type and having an increased endogenous O-acetyl-L-serine formation and an enhanced O-acetyl-L-serine efflux compared with the Wild type in a medium at pH 5.1-6.5.

USE - O-Acetyl-L-serine is used as a L-cysteine precursor.

ADVANTAGE - The product is obtained in high yields.

Dwg.0/1

TECHNOLOGY FOCUS:

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TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Microorganism: The microorganism, especially an Escherichia coli strain, contains a cysE allele (see e.g. WO 9715673) to provide increased endogenous O-acetyl-L-serine formation and a ydeD gene (see e.g. EP 885962) to provide enhanced O-acetyl-L-serine efflux.

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Preferred Process: The fermentation, which can be carried out continuously or batch-wise, especially using a feed-batch procedure, is carried out at 5.5-6. Fermentation is carried out at 15-45 (especially 30-37)degreesC, particularly for 1-3 days. Aerobic conditions are used and are provided by the introduction of O2 in the form of compresses air or pure oxygen.

The medium contains:

- (a) a sulfur source comprising 5-50 mM sulfur;
- (b) a carbon source, especially a sugar, particularly glucose or lactose, a sugar alcohol, particularly glycerol, or an organic acid, preferably dosed in continuously and especially to provide a concentration of 0.1-50 g/l;
- (c) a nitrogen source comprising ammonia, an ammonium salt or a protein hydrolyzate;
- (d) salts providing phosphorus, chloride, sodium, magnesium, N, potassium, calcium and iron and salts providing micro-m concentrations of molybdenum, boron, cobalt, manganese, zinc and nickel;
- (e) organic acids e.g. as acetate or citrate, amino acids, e.g. isoleucine. and vitamins, e.g. B1 and B6; and
- (f) yeast extract, cornsteep liquor, soya flour or malt extract.

FILE SEGMENT: CPI
FIELD AVAILABILITY: AB; DCN
MANUAL CODES: CPI: B10-B02H; B11-A01; D05-C01; E10-B02D5; E11-M